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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,267	01/19/2001	Wen Tong	11962ROUS02U	1339

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EXAMINER

NGUYEN, HANH N

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/766,267

Applicant(s)

TONG ET AL.

Examiner

Hanh Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Application filed on 1/19/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 8, 15 and 21-24 are rejected under 35 USC 102(e) as being anticipated by **Raleigh et al.** (US pat. No. 6,463,096 B1).

In claims 1, 8, 15, 16 and 21-24, **Raleigh et al.** discloses, in Fig.1, a wireless network 100 wherein a radio hub 102 (base station) allocates to each data communication device 104 (user terminal) a transmission frame associated with a particular rate (transmitting data frames to plurality of users from base station). Each transmission frame, as discribed in Fig.4A, either indicates a data device CP3 allocated in entire frame C with a corresponding rate 30 Mbps or a plurality of data devices CPE1-CPE15 in frame A with a corresponding rate 2 Mbps (each high speed frame include indications of at least one user terminal and data rate). The data device 104

requests radio hub 102 for accessing Internet 108 via allocated transmissin frame. Therefore, the allocated frame must transmit data between Internet 108 and data communication device 104 (frame carries data communication). Fig.3 comprises a typical data communication device 104 comprising a TDM to IP voice interface 310 that converts IP packet to TDM. Therefore, the data communication devices 104 transmit data to the hub 102 in a time division multilexed frames (wirelessly transmitting TDM superframes). See Abstract & col.5, lines 30-40 & col.6, line 35 to col.7, line 10. In Fig.2, the radio hub 102 (base station) comprises antenna 110 (an antenna) coupled to a radio link 208 (a RF coupled to the antenna) ; and a bandwidth management 210 coupled to the radio link 208 (digital processor coupled to radio frequency unit). The bandwidth management 210 (digital processor) and the radio link 208 (RF unit) operate as integrated software packages which inherently provide instructions to the radio hub 102 (digital processor executes software instructions for the base station). See col.5, lines 45-51.

In claims 2 and 9, **Raleigh et al.** discloses, in Fig.4B, that data communication devices CPE1, CPE2 are allocated 2Mbps in frame A while data device CPE3 allocated 26 Mbps in the same frame A (a plurality of data rates allocated within high peed data frame). See col.7, lines 30-40.

In claims 7 and 14, **Raleigh et al.** discloses, in Fig.4B, that frame A comprises 2 parts. The first part is allocated to data device CPE1-CPE2 at 2 Mbps (the primary data rate indicator indicates a user terminal and asociated data rate). The second part is allocated to data device CPE3 at 26 Mbps (the secondary data rate indicator indicate a user terminal). See col.7, lines 34-42.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 13 are rejected under 35 USC 103(a) as being unpatentable over **Raleigh et al.** (US pat. No. 6,463,096 B1) in view of **Love et al.** (US Pat. No. 6,058,107), and further in view of **Christodoulides et al.** (US Pat. No. 6,665,361 B1).

In claims 6 and 13, **Raleigh et al.** does not disclose data frame including pilot signal and reverse link power control bit. **Love et al.** discloses, in Fig. 8, frame 800 comprising a reverse power control bit 801 (frame comprising a reverse power control bit). See col. 14, lines 52-56. **Christodoulides et al.** discloses, in Fig. 5 & 6A a frame of 160ms comprising pilot symbols. Therefore, it would have been obvious to one ordinary skill in the art to combine **Christodoulides et al.**, **Love et al.** with **Raleigh et al.** in order to allocate user terminal in at least one frame associated with a particular rate.

Claims 3-5, 10-12, and 17-20 are rejected under 35 USC 102(e) as being anticipated by **Raleigh et al.** (US pat. No. 6,463,096 B1) in view of **Rydbeck et al.** (US Pat. No. 6,332,006 B1),

In claims 3, 4, 5, 10, 11 and 12, **Raleigh et al.** does not disclose different coding types, coding frames with Walsh codes; and modulation scheme within a frame. **Rydbeck et al.** discloses, in Fig. 6a, a base station 610 encodes data message (high rate data), voice messages (low rate data) by a convolution coding, Walsh coding (coding message by first coding type,

second coding type) before transmitting to subscriber 650. The encoded messages is Pi/4-DQPSK modulated before being transmitted to the subscriber 650 (modulating scheme). See col.10, lines 5-25 & col.11, lines 35-45. Therefore, it would have been obvious to one ordinary skill in the art to combine the encoding technics of **Rydbeck et al.** into **Raleigh et al.** in order to reduce error and protect confidential data from being detected by undesired receivers.

In claims 17 and 18, **Raleigh et al.** discloses receiving data of the frame; and determine that the data frame is intended for the user terminal in claim 15. **Raleigh et al.** does not disclose decoding a portion of superframe with Walsh codes; decoding data frame using a first coding type; decoding data in frame using a second coding type. **Rydbeck et al.** discloses, in Fig.6B, the subscriber 650 receiving encoded messages, demodulates the messages as in Fig.5B (first decoding type); decodes the messages by Walsh transform 652 (second decoding type). See col.10, lines 33-45. Therefore, it would have been obvious to one ordinary skill combine the decoding technics of **Rydbeck et al.** into **Raleigh et al.** in order to determine the data.

In claims 19 and 20, the limitations of these claims have been addressed in claims 1 and 15.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Periyalwar et al. (US pub. No. US 2001/0053141 A1) discloses Frame Structures Supporting Voice or Streaming Communications with High Speed data Communications in Wireless Access networks.

Raith (US Pat. No.6,498,936 B1) discloses Methods and Systems for Coding of Broadcast Messages.


Le Strat et al. (US pat. No. 6,456,598 B1) discloses Method of Adapting the Air Interface in a Mobile Radio System and Corresponding Base Transceiver Station, Mobile Station and Transmission Mode.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 703 305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen


April 3, 2004